# Nutrition Policy in the 1990's

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cientific research increasingly confirms that a healthful diet reduces the risk of developing chronic diseases. Many groups, including the food industry, voluntary organizations (like the American Heart Association), and Federal and local government agencies, either independently or cooperatively, have stepped in to accelerate the trend toward healthful eating by promoting eating patterns that conform to Federal recommendations. These efforts have focused on providing nutrition information and education to persuade and guide Americans to consume more healthful diets, and/or directly altering the nutrient content of foods or meals.

Many Americans seem to have heard the message. High interest in nutrition during the 1990's prompted the food industry to step in with products and information to help Americans choose healthful foods. Evidence suggests that some Americans are changing their diets and moving closer to recommendations by nutritionists and other health professionals. However, changes vary considerably, both for individuals and food groups. For

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example, USDA food consumption surveys show that fat intake as a percentage of total calories has declined in the last decade—a move in the right direction. The same surveys, however, show that people are not increasing their consumption of fruits and vegetables as recommended, and that the number of obese Americans is rising.

#### Dietary Guidelines Evolve Over the Decade

The Dietary Guidelines for Americans serve as the focal point for the Federal Government's nutrition messages and interventions. Since 1980, the U.S. Department of Agriculture (USDA) and the U.S. Department of Health and Human Services (DHHS) have jointly revised and published the Dietary Guidelines every 5 years. In 1990, DHHS and USDA released the third edition of the *Dietary Guidelines*. For the first time, numerical recommendations were made for intakes of dietary fat and saturated fat. The Dietary Guidelines advised that 30 percent or less of calories should come from fat, and less than 10 percent of calories should come from saturated fat. Consumers were advised to enjoy a healthy diet through eating a variety of foods and enjoying foods in moderation, instead of emphasizing dietary restrictions. For example,

instead of "avoid too much sugar," the 1990 *Dietary Guidelines* said "use sugars only in moderation" (table 1).

The language was changed in 1995 to be more positive. The 1995 edition of the *Dietary Guidelines* emphasized the word "choose." For example, "use sugars only in moderation" became "choose a diet moderate in sugars." The 1995 edition also mentions physical activity, and continues a move away from the original 1980 recommendation to "maintain ideal weight" with "balance the food you eat with physical activity; maintain or improve your weight."

#### Food Guide Pyramid Advises Healthier Choices

The Food Guide Pyramid, released in 1992, was developed to help consumers translate the *Dietary Guidelines* and Recommended Dietary Allowances into actual food choices. The Pyramid graphically represents what constitutes a good diet, and both professionals and the public are aware of and widely recognize the Pyramid.

In addition to use within the Federal Government, food companies and associations, media, educators, and others in the private sector use

Table 1

Dietary Guidelines Change Over Time

1980	1985	1990	1995	2000
Eat a variety of foods.	Eat a variety of foods.	Eat a variety of foods.	Eat a variety of foods.	Let the Pyramid guide your food choices.
Maintain ideal weight.	Maintain desirable weight.	Maintain healthy weight.	Balance the food you eat with physical activity: maintain or improve your weight.	Aim for a healthy weight. Be physically active every day.
Avoid too much fat, saturated fat, and cholesterol.	Avoid too much fat, saturated fat, and cholesterol.	Choose a diet low in fat,saturated fat, and cholesterol.	Choose a diet low in fat, saturated fat, and cholesterol.	Choose a diet that is low in saturated fat and cholesterol and moderate in total fat.
Eat foods with adequate starch and fiber.	Eat foods with adequate starch with and fiber.	Choose a diet with plenty of vegetables, fruits, and grain products.	Choose a diet with plenty of grain products, vegetables, and fruit.	Choose a variety of grains daily, especially whole grains. Choose a variety of fruits and vegetables daily.
Avoid too much sugar.	Avoid too much sugar.	Use sugars only in moderation.	Choose a diet moderate in sugar.	Choose beverages and foods to moderate your intake of sugars.
Avoid too much sodium.	Avoid too much sodium.	Use salt and sodium only in moderation.	Choose a diet moderate in salt and sodium.	Choose and pre- pare foods with less salt.
If you drink alcohol, do so in moderation.	If you drink alcoholic beverages, do so in moderation.	If you drink alcoholic beverages, do so in moderation.	If you drink alcoholic beverages, do so in moderation.	If you drink alcoholic beverages, do so in moderation.
NA – Not applicable	NA	NA	NA	Keep food safe to eat.

NA = Not applicable.

Source: USDA/DHHS, Nutrition and Your Health: Dietary Guidelines for Americans, 1980, 1985, 1990, 1995, 2000.

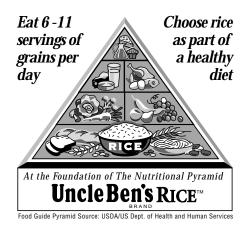
the Pyramid. Publishing companies, for example, have updated high school and college nutrition textbooks to include the Pyramid. Trade associations—such as the Wheat Foods Council, National Pasta Association, and the USA Rice Council—have used the Pyramid in their nutrition education materials aimed at the public. The Food Guide Pyramid graphic is appearing more frequently on food packaging, especially boxes of cereal, graham crackers, and other grain products.

The Pyramid has been adapted for the dietary needs of different

groups of Americans. USDA released a special version of the Pyramid, which makes recommendations for healthy eating by children ages 2 to 6 in 1999. The children's Pyramid recommends the lower number of servings in each "block" and simplifies the names of each group. For example, the "Bread, Cereal, Rice and Potato Group" in the standard Pyramid became the "Grain Group" in the children's version, and the number of recommended servings simplified from 6 to 11 servings to 6.

#### Nutrition Labels Provide More Information to Consumers

The Nutrition Labeling and Education Act (NLEA), enacted in 1990, proposed to heighten awareness of the nutritional makeup of foods and to encourage food manufacturers to improve the nutrition of their products. The resulting nutrition labeling regulations, which became fully effective in mid-1994, provide consumers with an unprecedented amount of nutrition information on



Many food companies are using the widely recognized Food Guide Pyramid to promote the role of their company's products in a healthy diet.

virtually all processed foods. Required information includes total calories, calories from fat, saturated fat, cholesterol, sodium, total carbohydrates, dietary fiber, sugars, protein, and certain vitamins and minerals. The regulations also established guidelines to promote voluntary labeling about nutrition of raw, single-ingredient meat and poultry products.

The Nutrition Facts label may have been one of the most tumultuous changes the food industry has ever faced. For the first time, consumers received standardized nutritional information on all packaged foods that enabled consumers to quickly and easily compare the nutritional contents of foods to make informed choices. Food companies began reformulating products to compete for nutrition-conscious consumers' food dollars.

A Food Marketing Institute consumer survey conducted in early 1995 indicated that the label may effect some dietary change. Of those who had seen the label (43 percent of the shoppers interviewed), 22 percent indicated it had caused them to start buying and using food products they had not used before, and 34 percent said they had stopped buying products they once purchased regularly. Another sur-

vey, conducted under the auspices of the American Dietetic Association, indicated that 56 percent of interviewees claimed they modified their food choices, using this new labeling information.

#### Five-A-Day Campaign Promotes Eating Fruits and Vegetables

In 1992, the National Cancer Institute and the Produce for Better Health Foundation initiated the national "Five-a-Day for Better Health" campaign with the aim to increase Americans' fruit and vegetable consumption to at least five servings a day by the year 2000. The program included a national media campaign (newsletters to editors of food columns, public service announcements), point-of-purchase activities in supermarkets, and community education efforts. National Cancer Institute studies indicated that in 1991, just 8 percent of American adults thought they should eat five or more servings of fruits and vegetables each day, but by 1997, 38 percent of Americans believed they should eat five or more servings of fruits and vegetables each day.

Americans seem to be trying to follow through on their good intentions. A food consumption survey by USDA in 1994-6 indicated that the average daily intake of vegetables was 3.4 servings and that of fruits was 1.5 servings.

## Other Efforts Target the Nutrient Contents of Foods...

A second method to promote healthful diets involves changing the nutritional composition of foods. This method does not require consumer knowledge, understanding, or commitment to change food consumption behavior, but instead involves the Federal Government

and the food industry in improving the nutritional composition of the foods themselves. Food companies, seeking to differentiate their products from those of competitors, began adding vitamins to foods (in the form of powders and liquids) soon after their discovery in the 1910's and 1920's. (Fortification of foods was not common until lower cost, synthetic vitamins and minerals were developed in the late 1930's.) Companies continued to use nutrition as a marketing tool in the 1990's, adding nutrients to a variety of foods, such as calcium-fortified breakfast cereals and orange juice.

In the 1940's, the Federal Government set minimum and maximum levels for three B-vitamins (thiamine, niacin, and riboflavin) and iron for breads, rolls, and other grain products claiming to be "enriched." Other foods and nutrients also have government-established standards for fortification and enrichment. In 1998, the Government began requiring all enriched grain products to be fortified with folic acid, to reduce the risk of some birth defects.

#### ...And Meals

Federal programs that provide meals to specific populations have been revised to ensure that, in addition to providing a certain proportion of the recommended dietary allowances for energy, vitamins, and minerals, the meals are consistent with *Dietary Guidelines* recommendations of choosing a diet with plenty of grain products, vegetables, and fruits, and a diet low in saturated fat and cholesterol, and moderate in total fat.

Improving the nutritional quality of meals served in various Federal nutrition programs is part of efforts by government and public health organizations to improve food choices among target populations and educate participants and their families, showing that meals can be healthful and tasty.

School nutrition programs provide a good opportunity to improve the diet quality of the Nation's school children. USDA oversees a number of programs—including the National School Lunch Program and the School Breakfast Program. At its inception in the late 1940's, the National School Lunch Program was developed to provide balanced meals by focusing on minimum amounts of four specific components (meat, bread, vegetables/fruit, and milk) rather than on the nutrient content of the entire meal. USDA requires that breakfasts and lunches served in these programs meet both specific food and nutrition guidelines for school systems to qualify for USDA reimbursement and commodities.

A 1992 study showed that school lunches and breakfasts did not reflect current scientific knowledge about diet. School lunches exceeded the *Dietary Guidelines* recommendations for fat and saturated fat. Children who ate the school lunch consumed a higher amount of calories from fat than children who brought lunch from home or bought lunch from vending machines or elsewhere at school.

In November 1994, Congress enacted a law changing the nutrition criteria for reimbursable school meals by adding the requirement that meals be consistent with the nutritional guidance outlined in the Dietary Guidelines for saturated fat and total fat, to the longstanding goals of providing meals to meet established values of the Recommended Dietary Allowances for key nutrients and for calories. The law required schools to use one of five food- and nutrient-based menu planning systems, and to be in compliance by the first day of the school year 1996-97.

The new school meals menu is expected to reduce overall intake of fat and saturated fat among schoolage children. Further, since school meal participation rates are higher for low-income children, health benefits from improved school meals help the population that is at greatest risk of anemia, obesity, and other nutrition-related chronic diseases.

The Head Start program also provides a vehicle to promote healthful foods and diets. Head Start delivers comprehensive services in the areas of education/early childhood development, medical, dental, mental health, and nutrition to foster healthy development in low-income children. Head Start served approximately 822,000 children and their families in fiscal 1998. Children in the program are served a minimum of one hot meal and snack each day that, combined, meet at least onethird of the recommended dietary allowances for energy, vitamins, and minerals for children ages 3 to 5. USDA provides Head Start with commodities and cash. The 1994 Head Start Act requires Head Start

centers to add fruit or vegetables to the snack, not to serve overly sweet and sticky foods, to attempt to reduce the amount of fat in recipes and in food preparation, and to provide foods that do not need added salt

Other programs target the dietary needs of America's seniors. DHHS provides grants to State agencies for USDA's Nutrition Program for the Elderly to support congregate and home-delivered meals to people 60 years and over. USDA provides commodities or cash in lieu of commodities for each meal served. In fiscal 1998, about 114 million meals were served to 1.9 million elderly people in a collective setting, and 129.6 million home-delivered meals were served to 894,000 older people.

Meals served as part of the Nutrition Program for the Elderly must provide a minimum of one-third of an elderly person's Recommended Dietary Allowances for vitamins, minerals, protein, and food energy if the project provides one meal a day, two-thirds if two meals, and 100 percent if three meals. In 1993, Congress enacted legislation that required States to ensure that program meals complied with the *Dietary Guidelines*.

### Consumers and the Food Industry Respond

Consumers' attitudes about nutrition have changed over the past decade. The Food Marketing Insti-

Table 2
Consumers Became Concerned About Fat Content in the 1990's

Question: "What is it about the nutritional content (of foods) that concerns you the most?"

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Concern	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Percent												
Fat content	27	29	46	42	50	54	59	65	60	56	59	50
Salt/sodium content	26	25	30	22	21	26	18	20	28	23	24	16
Cholesterol	22	38	44	37	30	23	21	18	26	20	20	18
Nutritional value	14	8	6	8	5	10	4	8	6	11	12	17
Sugar content/less sugar	20	15	16	12	13	18	14	15	12	11	12	9

Source: Food Marketing Institute.

tute has surveyed food shoppers for many years, asking about issues related to food choices. Consumers were equally concerned about fat content, salt/sodium content, and cholesterol in the early 1990's (table 2). Information about the importance of decreasing the fat in our diets seems to have affected consumers because the share of interviewees citing fat content as the nutritional issue of greatest concern rose to 65 percent in 1995, before decreasing to 50 percent in 1999. The share of consumers who cite cholesterol as the most important concern rose to 44 percent in 1990, but decreased throughout the decade to 18 percent in 1999. Those citing sugar content as a primary concern fell from 20 percent in 1988 to 9 percent in 1999.

The food industry has responded to changing consumer attitudes, particularly concern about fat content of foods. Meat producers, for example, have responded by producing leaner products. Since the 1980's, the average cuts of beef and pork have slimmed down in fat content by roughly 30 percent. Producers are breeding leaner herds, feeding animals less fattening diets, and taking them to market earlier (the

younger the animal, the lower the fat content).

According to food industry sources, development of reducedfat food products tops the list for research and development investments. For example, 2,076 new food products introduced in 1996 claimed to be reduced in fat or fat free nearly 16 percent of all new food products introduced that year, and more than twice the number just 3 years earlier (table 3). In the past few years, however, the number of reduced- or low-fat products fell to 481 by 1999. The market for reduced- or low-fat foods might be saturated, or producers may have noted consumers' decreasing concerns about fat content.

Further down the marketing chain, retailers are also adopting procedures that reflect nutrition concerns and encourage healthful eating practices. Retailers now offer consumers three or four kinds of ground beef with varying fat content. Similarly, food stores' array of fruits and vegetables available has increased to accommodate consumers' growing interest in healthful eating and ethnic cuisines. Most supermarkets now have salad bars

and a variety of packaged, ready to eat salads.

#### New Dietary Guidelines Broaden the Nutrition Message

In May 2000, new *Dietary Guide-lines for Americans* were released containing 10 recommendations, instead of the 7 in earlier editions (table 1). For the first time, the *Dietary Guidelines* specifically recommend exercise and physical activity, advising Americans to "Be physically active each day." The new *Dietary Guidelines* also include for the first time a food safety recommendation to "Keep food safe to eat."

The 2000 Dietary Guidelines give greater detail and emphasize explicit recommendations for particular nutrients and foods. Fat intake recommendations now differentiate among total fat, saturated fat, and cholesterol, calling for a diet "low in saturated fat and cholesterol and moderate in total fat." The 1995 guideline recommending a diet with plenty of grains, vegetables, and fruits is now separated into two distinct recommendations. The guide-

Table 3
Introduction of New Reduced- and Low-Fat Foods Peaked in 1996

Claim <sup>1</sup>	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
	Number of new food products									
Reduced/low calorie Reduced/low fat Reduced/low salt Low/no cholesterol Reduced/low sugar Added/high fiber Added/high calcium	1,165 1,024 517 694 331 84 20	1,214 1,198 572 711 458 146 15	1,130 1,257 630 677 692 137	609 847 242 287 473 51	575 1,439 274 372 301 26 23	1,161 1,914 205 163 422 40 21	776 2,076 171 223 373 12 35	742 1,405 87 106 78 33 28	456 1,180 80 124 164 43 45	302 481 97 244 74 67 119
Total new food products <sup>2</sup>	10,329	12,412	12,347	12,925	15,016	16,890	13,287	12,483	11,065	9,814

<sup>&</sup>lt;sup>1</sup>Nutrient claims are not additive, as new products may carry more than one claim.

Source: New Product News, Global New Products Database.

<sup>&</sup>lt;sup>2</sup>Includes pet foods.

line for salt intake now specifically calls for lower salt intake and emphasizes food sources of sodium rather than salt added at the table as a source of dietary sodium. Regarding sugar, the new *Dietary Guidelines* reflect a growing concern about added sugars in beverages: "Choose beverages and foods to moderate your intake of sugars."

#### USDA Proposes New Nutrition Labeling for Fresh Meat and Poultry

On May 30, 2000, USDA's Food Safety and Inspection Service (FSIS) announced a proposal to require nutrition labels on fresh meat and poultry. Such a label would provide consumers with the same type of information provided for processed foods, such as fat and cholesterol content, calories, and percent of calories from fat. The goal is to help consumers make better-informed food choices by allowing them to easily and accurately compare nutrition contents of fresh meats.

When FSIS published its final nutrition labeling rule in 1993, the agency required labels only on processed foods that vary in composition by manufacturer and brand, such as hot dogs, luncheon meats, and sausage. Nutrition labeling for raw single ingredient products, like chicken breasts, hamburger, and steak, was encouraged on a voluntary basis. FSIS said at the time that it would monitor adoption of voluntary labeling every 2 years, beginning in 1995. If 60 percent of the fresh meat and poultry sold did not carry nutrition information, the agency would initiate a mandatory program. Surveys show a participation rate below this goal, and the agency has found that the nutrient

and fat content of ground or chopped products varies enough that consumers cannot make informed comparisons.

Under the proposed rule, the label for fresh meat and poultry would use the same "Nutrition Facts" format used for processed meat and poultry products. Nutrition information could either be placed on a package label or be displayed at the point of purchase. For example, retailers may choose to display information in the meat section of a grocery store listing nutrition information for typical cuts of popular meat products, rather than on a label applied to each package. Fresh foods regulated by the Food and Drug Administration (fruits, fish, and vegetables) are also under a voluntary nutrition labeling program.

Federal nutrition policies have evolved over the past decade, reflecting increasing awareness of complex relationships between diet choices and health. Developments in nutrition during the last decade have helped the Nation progress in the goal of ensuring a healthy, wellnourished population. However, challenges remain, particularly regarding the nutritional needs of the elderly and children. As the Nation ages, nutritional needs of the elderly population become increasingly important. Future nutrition research and education efforts will also focus on what has been called the "epidemic" of childhood obesity.

#### References

American Dietetic Association. 1995 Nutrition Trends Survey. Chicago, IL, May 1995.

Burghardt, J., and B. Devaney. *The School Nutrition Dietary Assessment Study: Summary of Findings*. Prepared for U.S. Department of Agriculture by Mathematica Policy

Research, Princeton, New Jersey, October 1993.

U.S. Department of Agriculture, Food and Consumer Service. "National School Lunch Program and School Breakfast: School Meals Initiative for Healthy Children," Federal Register, 7 CFR Parts 210 and 220, pp. 31188-222, June 1995.

)) for Health 1995: Balancing Convenience, Nutrition and Taste. Prepared for Food Marketing Institute and *Prevention Magazine* by Princeton Survey Research Associates, Princeton, NJ, 1995.

Lefebvre, R., L. Doner, C. Johnston, K. Loughrey, G. Bulch, and S. Sutton. "Use of Database Marketing and Consumer-Based Health Communications in a Message Design: An Example from the Office of Consumer Communication's '5 A Day for Better Health' Program." E. Maibach and R. Parrott, eds. Designing Health Messages: Approaches from Communication Theory and Public Health Practice. Thousand Oaks, CA: Sage Publications, pp. 217-46, 1995.

National Cancer Institute. "5 A Day National Omnibus Survey." 1997 Pre-5 A Day Week. Communication from Office of Cancer Communications, 1997.

U.S. Department of Agriculture, Center for Nutrition and Policy Promotion. "Are All Food Pyramids Created Equal?" *Nutrition Insights*, No. 2, April 1997.

U.S. Department of Agriculture, Center for Nutrition and Policy Promotion. *Dietary Guidelines for Americans*, 2000, 5th Edition. May 2000.

Weimer, Jon. "Accelerating the Trend Toward Healthy Eating: Public and Private Efforts." America's Eating Habits: Changes and Consequences, Elizabeth Frazao, ed. Agriculture Information Bulletin 750. U.S. Department of Agriculture, Economic Research Service, April 1999.